

WHAT IS CLAIMED IS:

1. A light emitting display comprising:

a display panel on which are formed a plurality of data lines for transmitting data current that displays video signals, a plurality of scan lines for transmitting a select signal, and a plurality of pixel circuits formed at a plurality of pixels defined by the data lines and the scan lines,

wherein at least one pixel circuit includes:

a light emitting element for emitting light corresponding to an applied current;

10 a first transistor, having a first main electrode, a second main electrode and a control electrode, for supplying a driving current for the light emitting element;

a second transistor being diode-connected;

15 a first switch for transmitting a data current from the data line to the second transistor in response to a select signal from the scan line;

a first storage element having a first end coupled to the first main electrode of the first transistor and a first main electrode of the second transistor, and a second end thereof coupled to the control electrode of the first transistor, the second end being coupled to a gate of the second transistor in response to a first level of a first control signal;

20 a second storage element coupled between the second end of the first storage element and a control electrode of the second transistor in response to a second level of the first control signal; and

a second switch for coupling the first transistor and the light

emitting element in response to a second control signal.

2. The light emitting display of claim 1, wherein the light emitting display operates in the order of: a first interval for selecting the first level of the first control signal and the select signal, a second interval for selecting the second level of the first control signal, and a third interval for selecting the second control signal.

3. The light emitting display of claim 2, wherein

the voltage of the control electrode of the second transistor is determined as a first voltage in corresponding to the data current in the first 10 interval;

a control electrode voltage of the second transistor is changed to a second voltage from the first voltage by the interception of the data current;

a control electrode voltage of the first transistor is determined as a third voltage by coupling of the first and second storage elements to store a fourth voltage in the first storage element in the second interval; and

a driving current corresponding to the fourth voltage is transmitted to the light emitting element from the first transistor in the third interval.

4. The light emitting display of claim 1, wherein

the pixel circuit further comprises a third switch coupled between the 20 control electrodes of the first transistor and the second transistor; and

the third switch is turned on by the first level of the first control signal.

5. The light emitting display of claim 1, wherein the first control signal is the select signal.

6. The light emitting display of claim 1, wherein the first control signal is

supplied from an additional signal line other than the scan line, and the first control signal has faster timing than the select signal.

7. The light emitting display of claim 1, wherein a channel width of the first transistor is equal to or shorter than the channel width of the second transistor.

8. The light emitting display of claim 1, wherein a channel length of the first transistor is equal to or longer than the channel width of the second transistor.

9. The light emitting display of claim 1, wherein
10 the first storage element is a first capacitor formed between the first main electrode and the control electrode of the first transistor;

the second storage element is a second capacitor formed between the control electrodes of the first transistor and the second transistor; and

capacitance of the first capacitor and capacitance of the second capacitor is determined by one of a screen size and resolution.

15 10. The light emitting display of claim 1, wherein uniformity between the threshold voltages of the first transistor and the second transistor is high.

11. A method for driving a light emitting display having a pixel circuit including a first switch for transmitting a data current from a data line in response to a select signal from a scan line, a first transistor including a first main electrode, a second main electrode and a control electrode for outputting a driving current corresponding to the data current, a first storage element formed between the first main electrode and the control electrode of the first transistor, and a light emitting element for emitting light corresponding to the

driving current from the first transistor, the method comprising:

coupling the control electrode of the diode-connected second transistor to the control electrode of the first transistor;

transmitting the data current from the first switch to the second transistor to establish a control electrode voltage of the second transistor as a first voltage;

forming a second storage element between the control electrodes of the first transistor and the second transistor;

intercepting the data current to modify the first voltage into a second voltage to which a threshold voltage of the second transistor is reflected;

using coupling of the second voltage and the first storage element and second storage element to modify the control electrode voltage of the first transistor into a third voltage from the first voltage; and

transmitting a driving current output by the first transistor to the light emitting element corresponding to the third voltage.

12. The method of claim 11, wherein the first main electrodes of the first transistor and the second transistor are coupled to a signal for supplying a power supply voltage.

13. The method of claim 11, wherein the threshold voltage of the first transistor substantially corresponds to the threshold voltage of the second transistor.

14. The method of claim 11, wherein
the pixel circuit further includes a second switch coupled between the control electrodes of the first transistor and the second transistor, and the

method further comprises:

turning on the second switch in response to an enable level of a control signal to couple the control electrodes of the first transistor and the second transistor; and

5 turning off the second switch in response to a disable level of the control signal to couple the second storage element between the control electrodes of the first and second transistors.

15. The method of claim 14, wherein the control signal is the select signal.

10 16. The method of claim 11, wherein a ratio of a channel width and a channel length of the first transistor is equal to or less than a ratio of a channel width and a channel length of the second transistor.

17. The method of claim 11, wherein a ratio of capacitance of the first storage element and capacitance of the second storage element is determined
15 according to one of a screen size and resolution.

18. A display panel of a light emitting display comprising:
a plurality of data lines for transmitting a data current that displays video signals;

a plurality of scan lines for transmitting a select signal;
20 a plurality of pixels defined by the data lines and the scan lines are formed; and

a pixel circuit formed at each of the plurality of pixels;
wherein at least one pixel circuit includes:
a light emitting element for emitting light corresponding to an

applied current thereto;

a first transistor having a first main electrode, a second main electrode and a control electrode, for supplying a driving current for emitting light from a light emitting element;

5 a second transistor being diode-connected;

a first switch for transmitting a data current from the data line to the second transistor in response to a select signal from the scan line;

a first storage element coupled to the control electrode of the first transistor; and

10 a second storage element, and

wherein the display panel operates in the order of:

a first interval for coupling control electrodes of the first transistor and the second transistor and storing voltage in the first storage element corresponding to a data current from the first switch,

15 a second interval for forming a second storage element between the control electrodes of the first and second transistors, and intercepting the data current to divide a voltage corresponding to a threshold voltage of the second transistor into the first and second storage elements, and

a third interval for transmitting a driving current output by the first transistor to the light emitting element, corresponding to the voltage stored 20 in the first storage element.

19. The display panel of claim 18, wherein

the control electrodes of the first transistor and the second transistor are coupled in response to a first-level first control signal;

data current is transmitted to the second transistor in response to the select signal in the first interval;

the second storage element is coupled between the control electrodes of the first transistor and the second transistor in response to a second-level
5 first control signal;

the select signal becomes a disable level to intercept the data current in the second interval; and

the driving current is transmitted to the light emitting element in response to a second control signal in the third interval.

10 20. The display panel of claim 19, wherein the first control signal is a select signal.

21. The display panel of claim 19, wherein the first control signal is a signal having faster timing than the timing of the select signal.

15